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ABSTRACT

Administrators in higher education feel mounting pressure to link planning and budgeting as resources become more scarce and environments more uncertain. Instead of turning to theoretically prescribed planning/budgeting systems as solutions, microeconomics provides a means of thinking about individual consumption that helps shed light on the nature of the institution's financial problems. It illustrates the complexity of the problem and the inadequacies of prescriptive systems. It also suggests four characteristics of an optimal system that links planning and budgeting: (1) estimating change in income and prices, reducing uncertainty as much as possible; (2) allowing for disproportionate budget shifts; (3) monitoring and reflecting changes in preferences; and (4) managing conflicting political pressure. If the decisionmaking process for linking plans with budgets is to be successful, it must: encourage frequent communication between planners and decisionmakers; ensure that similar or related decisions are made simultaneously rather than sequentially; and monitor important changes relating to income, cost, and preference, as well as calling attention to these changes so that they receive special notice. A brief description of an organization's use of the optimal systems is provided. Contains 2 references. (Author/KM)

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The Link Between Planning and Budgeting

By Ellen Earle Chaffee

1981

NCHEMS MONOGRAPH #1

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By Ellen Earle Chaffee

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Summary

Administrators in higher education feel mounting pressure to link planning and budgeting as their resources become more scarce and their environments more uncertain. Too often, they turn to theoretically prescribed planning/budgeting systems as solutions.

Microeconomics provides a means of thinking about individual consumption that helps shed light on the nature of the institution's financial problem. It illustrates the complexity of the problem and the inadequacies of prescriptive systems. It also suggests four characteristics of an optimal system that links planning and budgeting. An optimal system (1) estimates changes in income and prices, reducing uncertainty in these areas as much as possible, (2) allows for disproportionate budget shifts, (3) monitors and reflects changes in preferences, and (4) manages conflicting political pressures.

If the decisionmaking process for linking plans with budgets is to be successfully implemented, it must have the following three features. It must (1) encourage frequent communication between planners and decisionmakers, (2) ensure that similar or related decisions are made simultaneously rather than sequentially, and (3) monitor important changes that relate to income, cost, and preference, as well as call attention to these changes so that they receive special notice.

This monograph concludes with a case study that incorporates the four characteristics of an optional system that links planning and budgeting.

The Link Between Planning and Budgeting

By Ellen Earle Chaffee

Introduction

The vice-president sat back to think about the budget situation. For the past 10 years, library costs had been skyrocketing, and Greenfield University had allowed the library budget to coast. The librarian's budget request for a 15 percent increase plus a one-time cost of $75,000 was backed by impressive statistics about increases in postage rates and publishing prices. Estimates were high for book and periodical costs for the new interdisciplinary humanities program--a top priority for the school.

The dean of the law school had been insisting on a 19 percent hike for faculty salaries. This year, Greenfield had already lost three top professors to private practice. This was not surprising, considering that their average salary after leaving was nearly double what Greenfield had paid them. The average salary for first-year graduates of the school was more than the salary of assistant professors on the law faculty. Additionally, four more faculty members were being courted by the private sector and other law schools. At this rate, the law faculty would soon be decimated.

As if that were not enough, energy costs were up another 20 percent last year despite a vigorous conservation program, and they were projected to rise another 20 percent next year. The director of the physical plant had been urging a $175,000 capital investment to convert to cheaper fuels.

The dean of Engineering had reported losing at least 100 potential students every year to the competition because Greenfield does not offer electronic and biomedical engineering programs. The projections showed that eventually the tuition and research revenues of these programs would greatly exceed the costs involved, but would first require an expenditure of $50,000 for equipment and other start-up costs.

The vice-president was getting a headache. Her thoughts turned to the long-range plan recently completed by a blue-ribbon committee at Greenfield. Perhaps the plan could offer some guidance for dealing with budget decisions. It called for a return to the liberal arts base upon which Greenfield was founded and had established its reputation. It emphasized energy efficiency, stressed the need to maintain and even improve the quality of the faculty, and warned sternly against allowing any further erosion of the library. The vice-president sketched out solutions based on the long-range plan: (1) fund the library to get enough to cover only cost increases and the costs incurred in supporting the humanities program, (2) deny the special increase for the law faculty above the increase for liberal arts faculty, (3) spend the $175,000 for energy conversion, and (4) deny the engineering request.

It did not feel very good. Maybe she could do more. What were the financial projections? The five-year forecast showed a gap between income and expenses that was equal to 10 percent of the current budget. Last year's budget balanced, but it had been difficult to achieve. No help there. Those

projections had not even included the energy conversion project.

The Planning and Budgeting Problem

Why is it so tough for vice-presidents at Greenfield (and most other colleges and universities) to link planning and budgeting? It is not enough to blame inflation, demographics, and federal policies, even though these are, indeed, real and serious problems. It should be possible to grasp the nature of the problem and decide upon the most effective way of dealing with it. Decrementalism--making across-the-board cuts--and the serendipity of attrition seem to have accomplished all that they could (but not without creating problems of their own). The fact that administrators were attempting to link plans and budgets indicates a felt need to assert some control over the chaos. It is also an indication of the hope that, in making this linkage, the integrity of the institution could be maintained.

To the extent that the interest in linking planning to budgeting leads the administrator to turn to zero-based budgeting or hire strategic-planning consultants, it can divert the administrator from solving the real problem. Useful solutions can be identified only if the nature of the problem is understood.

Using a Microeconomic Model

With respect to planning and budgeting, institutions act like consumers. They have needs, desires, and an income that determines the limits of their budget. While there is an unlimited variety of goods available for them to consume, their priorities and pocketbooks reduce the number

of choices. But most activities are not considered by them to be consumer activities. If Greenfield could view itself as an individual, economic area of activity and its conflicting needs as choices, a useful planning/budgeting system would be one that helps determine the relative values and priorities of different choices.

Microeconomics provides a means of thinking about individual consumption that sheds light on the nature of the university's problem. Select any two goods that the vice-president is considering and let them comprise one of the tradeoffs that faces her. For example, put library restoration on one axis and salary increases for the law faculty on another. In theory, an indifference curve--a curve of marginal utility--could be constructed which represents the relative values of library restoration and law salaries, as shown in figure 1.

The curve's shape is determined by plotting the points that represent purchase combinations about which the consumer is potentially equally

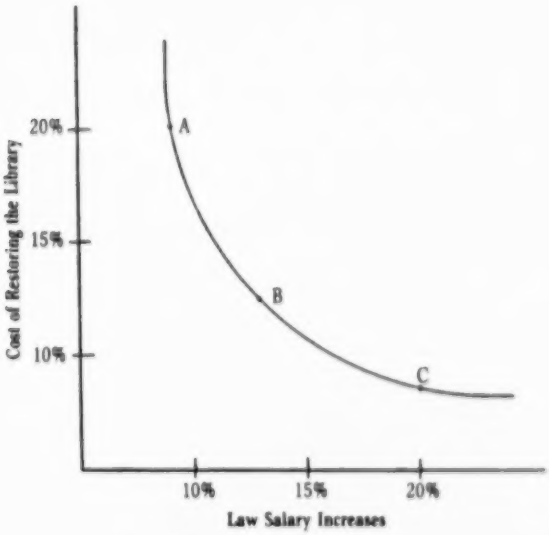

Figure 1. Indifference Curve

pleased or indifferent. According to the curve in figure 1, the consumer would be equally pleased to have any of the three following combinations: (1) about a 20 percent improvement in the library, together with a 10 percent increase in law salaries (point A); (2) a 12 percent improvement in each of these two goods (point B); or (3) an 8 percent improvement in the library and a 20 percent increase in law salaries (point C). These pairs of goods and all other points on the indifference curve represent combinations that the consumer believes to be of equivalent value.

Microeconomics offers suggestions about how to plot an indifference curve. Plotting an indifference curve is so complex, however, that a convincing argument can be made that the task is impossible. The purpose of presenting this analogy is therefore purely conceptual. It is a way to think about the planning/budgeting problem and not a method of acting on the problem. Practical implications are noted later in the monograph.

In theory, the indifference curve is convex to the origin. This is because the law of diminishing marginal returns states that, beyond some point, the more a consumer has of one good, the less value he or she places on having more of the same good. The indifference curve can also be more (or less) curved and tilted toward one of the axes. The form of the single curve is representative of an infinite number of curves that radiate from the origin outwards. A curve which is close to the origin is less desirable than one which is farther out. If the institution's relative preference between library restoration and law salaries changes, so does the shape and tilt of the curve. The curve is a stylized and highly simplified graphic representation of two wants or needs of the institution and their relative values. In fact, the diagram is not just two-dimensional; rather, it extends to as many dimensions as the institution has wants or needs. The curve is therefore extraordinarily difficult to plot. This is a problem addressed later.

Microeconomists add a line to this diagram to represent the individual's "consumption possibility," that is, how much of the two goods the individual's budget can purchase. This is also called the budget line. The total budget for the two goods can buy a certain amount of one good and none of the other. These two points can be identified on the axes. The first is all library restoration and no law salaries (point M in figure 2), and the second is all law salaries and no library restoration (point N). The line drawn from one point to the other includes all the combinations of the two goods that the institution can afford to buy. If the budget goes up, the line moves outward from the origin. The converse is true if the budget goes down. If the price of one good changes, a new point must be identified on the axis to represent the total amount that can be afforded. The new budget line would then have a different slope than the old one.

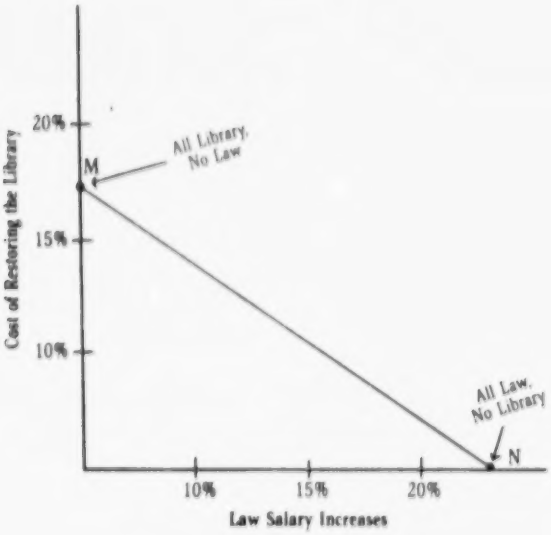

Figure 2.
Consumption Possibility (Budget) Line

When the indifference curve and the budget line are used together in the diagram, they meet at a single point that represents the optimal amount of each item that a rational consumer purchases. At this point, the consumer gets the most of each good given a certain budget. This is called the equilibrium point (point E in figure 3).

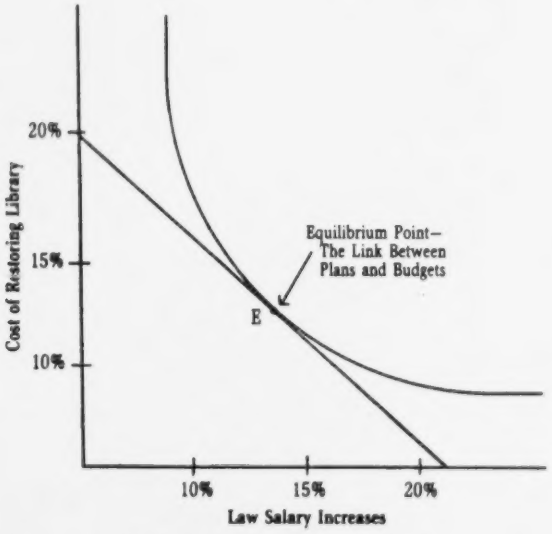

Figure 3. Equilibrium Point

In theory, this point is both what the consumer should and does buy. If the indifference curve is thought of as a symbol of Greenfield's plans and the budget line as its budget, then in theory the equilibrium point is the optimal link between its plans and budget. This merits a closer look before the gaps between theory and practice are noted.

In this conceptual model, incrementalism and decrementalism are shifts in the budget line. Consumption steps up to higher, that is, better, indifference curves (from B4 to B1 in figure 4), or

it steps down to lover ones (from B1 to B4). This is called budget drift. It works fine if individual preferences--the relative values placed on each item--never change over time. When thus conceptualized, it is clear why budget drift is not satisfactory in the long run. Preferences change as new goods become available, old goods wear out, and new demands are placed on the consumer. Budget drift cannot track them.

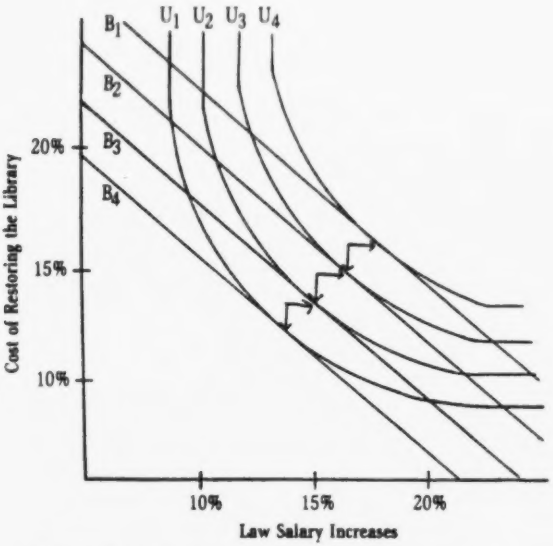

Figure 4. Changes in Income as Budget Drift—Incremental or Decremental

What happens when prices change? Depending on the shape of the indifference curve, changing the price of one item affects the amount that can be purchased of both items, as shown in figure 5. This happens because relative preferences of the two items stay the same and the price change acts like a change in the budget. According to this preference ratio, the consumption of both items is adjusted (for example, a move from K to L). If the price of beef goes up while the price of celery stays the same, some celery may be given up in order to eke

out a little more beef than seems possible given the price change. This is, however, still less than was purchased before.

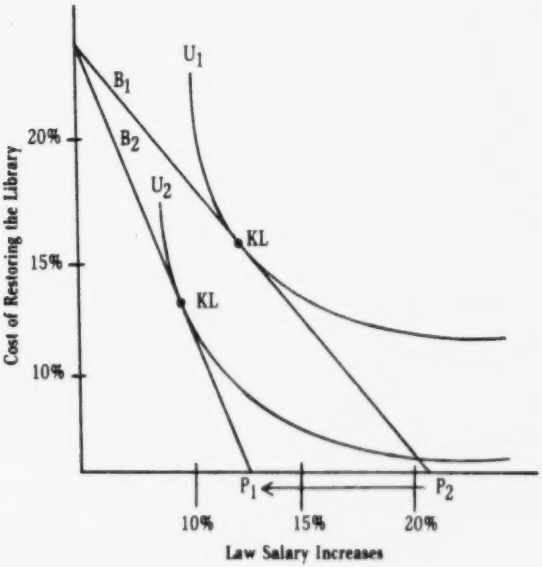

Figure 5. Price Change

Additionally, microeconomists theorize that, at some point when the price of beef is increasing, a similar, less expensive, item can be substituted for some of the beef that would have been bought had there not been a price increase. The vice-president's energy conversion illustrates the point. If the price of oil rises beyond a limit that seems reasonable, only a certain amount of the increased price can be absorbed by decreased consumption, that is, by conservation. The remainder must be absorbed by reduced consumption of other goods. At some point, the physical plant director can start thinking about substituting some other fuel. What makes it especially difficult in the Greenfield case is that the preparation to make the substitution itself carries a cost.

What happens when preferences change? The relative amounts of the two items that are purchased change. It is possible that such a shift means that what is purchased is mostly one item and little of the other (point S in figure 6). Put all these changes together, multiply by the number of dimensions in which the real planning and budgeting problem exists, multiply again by the number of uncertainties that must be anticipated by a one-year budget or by an administrator who thinks about the long term; multiply still again by the number of constituents who claim a role in determining what the indifference curve should look like, factor in the painful cuts and internal dissension caused by scarce resources, and there is little wonder that vice-presidents get headaches and analysts are exhausted! The value of the microeconomic analogy is that it helps to identify the fundamental reasons why achieving an optimal link between plans and budgets is so difficult. Furthermore, it illustrates the problem with incrementalism or decrementalism.

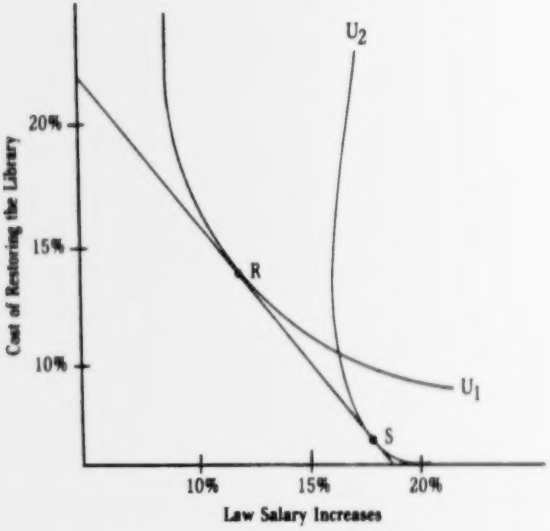

Figure 6. Preference Change

As valuable as across-the-board change is for achieving a sense of stability and for placating some of the internal dissension and claims of unfair treatment, it is simply inadequate for dealing with the complexities of the problems most institutions are trying to resolve. Once any slack in the organization has been removed by incremental or decremental change, there are only two special circumstances that warrant continued use of the budget-drift approach. The first occurs when the organization achieves a stable equilibrium among all the goods it purchases and the prices of the goods change proportionally. This is, however, an exceptional case. The other use for budget drift occurs when the organization's complexities are virtually impossible to grasp and track. Then there is as much justification for across-the-board change as for any other type of change. Indeed, there is more justification because it conserves energies for solving problems that are solvable.

Evaluating Linkage Systems

The discussion so far suggests some ideas about the optimal characteristics of a system that links planning and budgeting. The following points suggest what a planning/budgeting system should do:

1. Estimate changes in income and prices, reducing uncertainties in these areas as much as possible.

2. Allow for disproportionate budget shifts, instead of requiring budget drift. As prices and preferences change, optimal budget decisions are likely to require that consumption of one item be changed more than that of another. In most situations, a budget system that requires, or even encourages, budget drift is not sufficiently flexible to allow the institution to seek an optimal solution.

3. Monitor and reflect changes in preferences. This implies a need to determine whose preferences are to be accommodated and the relative weight that will be assigned to each set of preferences. This is made easier to the extent that the institution is able to identify which of its preferences are constant. The minimum tolerable levels of consumption for as many items as possible must also be identified. These items include academic programs, salary levels by category of employee, library acquisition rates, and items defined in some other terms that are susceptible to this kind of decision.

4. Manage conflicting political pressures. Conflict is generated by at least two factors. One factor is the need to attend to more than one person when identifying the shape of the indifference curve. It is difficult enough for any one person to state a complete preference list. This is compounded enormously when the preference list involves different individuals whose personal well-being lies in protecting their own priorities. The second factor that generates conflict is a scarcity of resources. Contenders for resources attempt to exert influence over the decision about how to allocate resources. The management of conflicting pressures allows the contenders to make themselves known and understood. This process permits nonpowerful but valuable interests to be represented in the final decision.

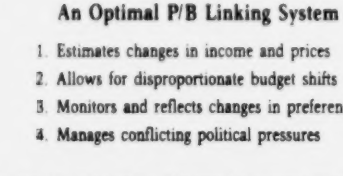
An Optimal P/B Linking System
1. Estimates changes in income and prices
2. Allows for disproportionate budget shifts
3. Monitors and reflects changes in preferences
4. Manages conflicting political pressures

Figure 7. Linking Planning and Budgeting

Approaches to Linking Planning and Budgeting

It is useful and instructive to examine existing approaches to linking planning with budgeting from the perspective of the above-mentioned characteristics in order to determine how well they perform. The first, budget drift, neither deals with changes in preferences nor allows for disproportionate budget shifts. Its practitioners estimate changes in income and prices so that they know at what overall level to target the increase or decrease. The system seeks to minimize, but does not manage, conflicting pressures. In effect, it ratifies the existing power distribution in the institution.

Budgeting by "The King's Decree"--autocracy--varies, depending entirely on the characteristics of the king. In many cases, the autocrat cannot invest heavily in monitoring and reflecting changes in preferences among constituents. This holds true particularly when the purpose of autocratic decisionmaking is to grant primary weight to his or her own preferences. Furthermore, this method is not congruent with one of the significant values of most institutions of higher education, namely, collegiality.

The method identified most often with Harvard--"Each Tub to its Own Bottom"--involves shifting the level of analysis from the institution to the school or to another subunit. Since each subunit is largely on its own financially, it can link plans and budgets in different ways from other subunits. There is no inherent reason why the approach should not allow disproportinate budget shifts; and, indeed, if one subunit is compared to another, the shifts might turn out to be quite large. The greatest weakness of this method for most institutions is this potential for imbalance between the subunits. From the point of view of the institution, it is exceedingly difficult to monitor and reflect changes of preference.

The third approach is often referred to as "The Squeaky Wheel Gets the Grease." It is essentially a political model in which the loudest and strongest get the highest proportion of resources. This method allows for disproportionate budget shift. Conflicting internal pressures are not managed, however; they are ratified. It is therefore hard to incorporate institutionwide preferences, and estimates of income and price changes are used only to establish the stakes available in the contest.

The fourth approach, called the "Planning-Programming-Budgeting System" (PPBS), is an old standby that conforms well in theory to the four characteristics of figure 7. This should come as no surprise, since both the microeconomic model of individual choice and PPBS are heavily influenced by the rational model of decisionmaking. Using PPBS, changes in income and price are estimated, changes in preferences are monitored and reflected, disproportionate shifts are allowed, and conflict is managed. In the translation of theory to reality, however, there are at least three problems with PPBS. First, institutions tend to express preferences and dole out funds in connection with organized departments, while PPBS deals with programs. PPBS is concerned with programs, even if the programs cross departmental boundaries or are subsumed as small parts of organized departments. Second, the management of conflict is achieved through the expectaton that rational explanations mitigate disagreements. Third, PPBS has been tried in higher education, but extensive research has not uncovered even one report of an enduring and theoretically true application of the technique in a college or university. For whatever reasons, PPBS does not seem to have survived, much less flourished, in higher education. If this is due to factors other than the reliance of PPBS on the rational model of decisionmaking (and it is possible that its brief life resulted from the way it was implemented, rather than conceptualized), then faulting PPBS does not necessarily condemn the principles for linking planning and budgeting that are proposed here.

The fifth approach, called "Zero-Base Budgeting" (ZBB), very clearly meets the first three characteristics--estimating changes in prices and income, monitoring and reflecting changes in preference, and alloving disproportionate budget shifts. However, like PPBS, ZBB relies on the persuasion of rational argument. It highlights and exacerbates political conflicts. To the extent that it acknowledges the poverful effects of self-interest, it does so only because of the astuteness of the individual who is orchestrating the process. Furthermore, academic values are diffiuclt to accommodate in the preference functions of ZBB.

A final approach to linking planning and budgeting is strategic planning. Its definitions and forms vary so widely from one proponent of higher education to another that it is difficult to generalize about it. Most clearly, one can say that it is an attempt to monitor and reflect changes in preference, using a particular set of lenses for vieving those preferences--lenses that focus on high-level policy decisions, the environment, and the futurity of present decisions. Most models of strategic planning stop short of dealing with budget details such as estimating changes in income and prices or making disproportionate budget shifts, and they do not manage conflicting budgetary pressures.

Implications of the Optimizing Characteristics

With the exception of budget drift, none of the above-mentioned systems for linking planning and budgeting has gained vide acceptance and use in higher education. This is not too surprising. The Carnegie book, Three Thousand Futures, conveys an appropriate sense of the diversity among colleges and universities and the vays in which they are likely to evolve. Since it is through planning and budgeting activities that these futures will be created, either deliberately or inadvertently, one might expect 3,000 varieties of planning and

budgeting activities. Each one would be based on the institution's structure, history, mission, and context, as well as its current situation and the people it employs and teaches. In order to find generalizations that work across institutions, one must operate at the level of principles, not activities.

Such principles are not readily forthcoming, however, because very little empirical or theoretical work focuses on the management of higher education relative to the complexity and scope of the issues which it faces. It is important to communicate at the level of principles, that is, to propose them, debate them, revise them, apply them, throw some of them out, and start over. It is in this spirit that the four characteristics of an optimal system that links planning and budgeting are proposed. The problem is not finding the right system; rather, it is creating one which is unique to the institution and embodies the four characteristics. The discussion which follows suggests the implications of the characteristics for the behavior of planners, analysts, and executive decisionmakers.

The most important implication is that an institution that analyzes its current planning/budgeting system from the perspective of a set of principles can find that it is generally doing very well but has limited deficiencies in one or two areas. Once the areas are identified, tinkering at the margin with the present system can solve the problem. This is a solution that is preferable to hiring armies of consultants or starting all over with a new system that is foreign to the school.

The four characteristics can be further analyzed to suggest some activities that should occur in the institution. Planners and analysts should work with decisionmakers to identify the internal and external factors that are most critical for determining income, costs, and preferences. The relative importance of the factors varies from one institution to another. The planner needs to analyze the components of these factors, measure

their effects, and estimate the ways in which they are likely to change in the future. In this process, the planner deals with both the activities and resources of the institution. The characteristics suggest only two factors that might not be explicit for some planners. These are creativity and iteration.

Creativity is necessary to avoid becoming fixed in old habits and visions, and it is most important in connection with reading and interpreting changes in the preference list. For example, if an institution is in the habit of surveying student opinion about different aspects of institutional functioning, and if the institution decides to start offering classes in the evenings and on the weekends, planners need to recognize that the new classes are attracting new kinds of students whose opinions should also be sampled.

Iteration refers to the need for planners to be in touch with executive decisionmakers. Planners must check underlying assumptions and encourage appropriate changes in assumptions. Assumptions are critical to the work of the planner. Assumptions must be made explicit, and they must be congruent with those that executive decisionmakers are willing to make. The planner is in an excellent position to detect that the assumptions are proving inadequate to the task, and he or she has the responsibility to bring this to the attention of the decisionmakers for joint resolution.

Executive decisionmakers have challenges of a different sort. It is up to them to identify and articulate institutional constants--those aspects of values, purposes, structure, and minimum acceptability that change only in the long run, if at all. They must also develop concrete visions of future possibilities that are congruent with the preferences of the institution. Both of these activities are summed up by a political philosopher who stated that the function of leadership is "to find the words that will enable the group to speak as a single voice" (Diesing 1962, p. 200).

Leadership is more an art than a science; it calls for intuitive--not analytical--capabilities. Therefore, analytical tools, like the Institutional Goals Inventory, are of little help. And, on a less abstract level, it is the decisionmaker's responsibility to develop sufficient flexibility in the system to allow disproportionate budget shifts. State schools in Colorado, for example, recently won significant increases in autonomy from legislative control over line-item expenditures.

Finally, the decisionmaking process for linking plans with budgets must have three features if it is to be able to implement the characteristics suggested earlier. First, it must allow and encourage frequent communication between planners and decisionmakers so that assumptions can be checked and revised, and preferences incorporated. Second, in order to make the kinds of tradeoffs envisioned by the microeconomic analogy, similar or related decisions must be made simultaneously rather than sequentially. Third, the process must monitor important changes that relate to income, cost, or preference and call attention to these changes so that they will receive special attention.

A Case Study of an Optimal Planning/Budgeting System

Each spring, the planners at a university identify the areas about which they had insufficient information the preceding year. These become the subjects of special studies during the summer. Early in the fall, planners from both the academic and business sides of the university begin seven months of weekly meetings that culminate in the presentation of the proposed budget to the Board of Trustees. At these meetings, the planners discuss the kinds of budget requests that they expect to receive, their estimates of income and costs, and the issues about which they need executive guidance. By the second month of meetings, they have produced

the first version of what are called "parameters papers"--rough estimates of income and expenses for the next year. Each is divided into about 10 major categories. The first version helps them identify how problematical the budget is likely to be, that is, how large the gap between income and expense projections is likely to be. As more precise information becomes available during the remaining months of meetings, the parameters papers are then reiterated, refined, and reduced to six or seven versions of the papers. In the meantime, recalculations for the parameters papers help identify where major problems are likely to surface. Concurrently, but using different and broader data sources, the group generates sucessively refined versions of a five-year financial forecast.

Another series of meetings also takes place during this period. The same planners meet every two weeks with the vice-presidents and the president to brief them on current estimates, point out potential problems, and obtain guidance in solving these problems. These meetings help the executives determine their position regarding budget requests. The academic vice-president, for example, writes a protocol letter to the deans describing constraints and priorities as he or she sees them for the coming budget year. In that letter, the vice-president solicits from each dean a budget letter itemizing requests. Each request is supported by analytic rationales and documentation. Before the dean writes the protocol letter, however, the vice-president and the academic planners meet with each dean. These meetings provide for both sides informal assessments of what is needed and what is feasible.

When the budget letters come in from the deans, the academic planners use them to develop a complete list of all requests. Although the vice-president reads all the letters and might discuss questions with the deans, he makes his funding decisions by revieving the list of all requests. Since neither the vice-president nor his expressed preferences

have changed for several years, the deans are likely to have made their requests and written their justifications so as to appeal to these preferences. fortunately for all concerned, the vice-president developed his preferences through astute judgments about what was most important to him and the faculty. This feature of the deans' requests makes the vice-president's simultaneous decisions about all requests both easier and more difficult. They are more difficult because they all tend to appeal to his preferences; they are easier because he can hardly lose. Whatever he decides to fund will help the institution achieve what he wants it to achieve.

While the deans' letters are arriving and the list of all requests is taking shape, the weekly and biweekly joint meetings continue. The planners are dealing with financial constraints, and their deliberations both inform and are informed by the planning discussions among the executive decision-makers at several levels. Overall the process is similar to what has been termed "convergent budgeting" (Bacchetti 1978). Plans and budgets are gradually knitted together through an iterative process involving both analysts and decisionmakers.

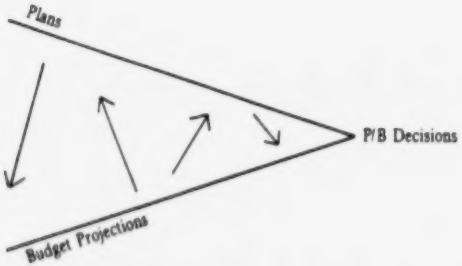

Figure 8. Convergent Budgeting

As for developing flexibilities in the system, this university is fortunate in being privately controlled and reasonably secure financially. The challenge is surely greater for public and financially troubled institutions. A flexibility-inducing system in this case is the conditional

budget to which are assigned important budget requests that are not critical and are potentially deferrable. The conditional budget items are rank-ordered. Possible sources of funding are identified, including tuition income and indirect cost income that exceeds projections. If and when that income materializes, conditional budget items are authorized in the order that they appear on the list. Another system that promotes flexibility is one-time funding. When a budget request involves an experimental venture, or perhaps a cost that cannot be avoided but is unlikely to be authorized over the long term (for example, the salary of a retiring dean who is returning to the faculty for a short time and will not be replaced when he or she leaves), the request can be authorized. The temporary nature of the authorization is made very clear at the outset, and it is flagged in such a way that it will not slip unnoticed into the permanent budget.

To summarize, many different planning/budgeting systems are required to meet the needs of diverse institutions. It is not necessary to abandon the possibility of finding rationally optimal solutions. The basic principles underlying how the search might be conducted can be identified. In fact, the four characteristics in this monograph are principles that underlie a successful search for the optimal solution.

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